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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,016	09/24/2003	Lee D. Tice	SYS-P-1210 (8364-90491)	4547
7590	05/04/2005		EXAMINER PREVIL, DANIEL	
Patent Services Group Honeywell International, Inc. 101 Columbia Road P. O. Box 2245 Morristown, NJ 07962			ART UNIT 2636	PAPER NUMBER

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/670,016	Applicant(s) AK TICE, LEE D.	
	Examiner Daniel Previl	Art Unit 2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 42-52 is/are pending in the application.
4a) Of the above claim(s) 29-41 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 2, 4-25, 27, 28, 42 and 45-52 is/are rejected.
7) ☒ Claim(s) 3, 43 and 44 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/03/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-28, 42-52 are presented for examination and claims 29-41 are withdrawn from consideration due to election restriction.

Drawings

1. The informal drawings Fig. 3A-fig. 3C are not of sufficient quality to permit examination. Accordingly, replacement drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to this Office action. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

Applicant is given a TWO MONTH time period to submit new drawings in compliance with 37 CFR 1.81. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a). Failure to timely submit replacement drawing sheets will result in ABANDONMENT of the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 1-2, 4-25, 27-28, are rejected under 35 U.S.C. 102(b) as being anticipated by Tice (US 5,659,292).

Regarding claim 1, Tice discloses an ambient condition detector (fig. 2, ref. 32) comprising: at least one of a smoke sensor or a thermal sensor (smoke sensor 52) (col. 4, line 35); a sensor of incident radiant energy responsive to sources of radiant energy exclusive of the smoke sensor or the thermal sensor (col. 3, lines 56-65); a control circuitry (control 40) (fig. 3) coupled to the sensors (fig. 3) and responsive to selected transient changes in incident radiant energy to shorten the time to respond to a predetermined ambient condition (the control circuitry determines the rate of change) (col. 4, lines 28-54).

Regarding claim 2, Tice discloses additional circuitry to shorten the response time by adjusting at least one of a sensitivity parameter associated with the smoke sensor in response to changes in incident radiant energy (col. 1, lines 23-27).

Regarding claim 4, Tice discloses additional circuitry responsive to incident radiant energy to determine the presence of a flame (condensation) (col. 4, lines 38-46).

Regarding claim 5, Tice discloses executable instructions to process signals from the sensor of incident radiant energy to establish the presence of a flame (col. 4, lines 38-65).

Regarding claim 6, Tice discloses the smoke sensor is displaced from the sensor of incident radiant energy (col. 3, lines 56-64).

Regarding claims 7-8, 12-13 Tice discloses the control circuitry is at least in part, coupled to at least one of the sensors by a bi-directional communication medium (col. 2, lines 37-40).

Regarding claim 9, Tice discloses the smoke sensor comprises a photoelectric type smoke sensor and responsive to radiant energy indicative of flame, the control circuitry shortens response time of the smoke sensor by at least one of increasing a sample rate of the smoke sensor (col. 3, lines 56-65; col. 4, lines 32-42).

Regarding claim 10, Tice discloses incident radiant energy indicative of a flame, to increase a sensitivity parameter of the thermal sensor (col. 3, lines 60-65).

Regarding claim 11, Tice discloses executable instructions for processing signals from the sensor of radiant energy to establish a flaming fire as a likely source of the radiant energy (col. 4, lines 38-64).

Regarding claims 14-15, Tice discloses executable instructions compare signals from the radiant energy sensor to a pre-stored fire profile (col. 3, lines 25-65).

Regarding claim 16, Tice discloses additional instructions correlating signals from the light sensor (photoelectric) (col. 3, line 57) with signals from the thermal sensor in establishing the presence of a fire condition (col. 3, lines 23-27 and lines 56-65; col. 4, lines 55-64).

Regarding claims 17-18, Tice discloses additional executable instructions, responsive to an established flaming fire, for altering a response parameter of the thermal sensor (col. 4, lines 32-64).

Regarding claim 19, Tice executable instructions responsive to a step change in incident radiant energy, to adjust a parameter of the other sensor (col. 1, lines 23-27).

Regarding claim 20, Tice discloses executable instructions responsive to decrease in incident radiant energy (col. 4, lines 48-54).

Regarding claim 21, Tice discloses a detector for sensing an environmental condition (col. 1, lines 23-33) comprising: a light sensor (photoelectric) (col. 3, line 57) which generates a first signal indicative of incident ambient light intensity (col. 3, lines 56-63); at least a second sensor which generates a second signal indicative of a different environmental condition (humidity sensor 54) (fig. 3, ref. 54); a processor that receives the first and second signals, the processor using the first signal to alter a delay time associated with the second sensor, and the processor providing an indication of the presence of the environmental condition (fig. 3; col. 3, lines 56-67; col. 4, lines 1-22 and lines 31-64).

Regarding claim 22, Tice discloses the processor alters the delay time in response to the first signal indicating the presence of a fire condition (col. 4, lines 32-64).

Regarding claim 23, Tice discloses the environmental condition is at least one of a fire or a smoke condition (col. 3, lines 56-65).

Regarding claim 24, Tice discloses the processor alters the delay time in response to the first signal indicating the presence of a predetermined ambient light intensity (col. 3, lines 56-65; col. 4, lines 32-65).

Regarding claim 25, Tice discloses the first signal is indicative of a pattern of varying incident light (increase the level of reflected light) (col. 3, lines 61-65).

Regarding claim 27, Tice discloses fire (col. 3, lines 56064).

Regarding claim 28, Tice discloses predetermined level of the second signal (col. 3, lines 60-65).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 26, 42, 45-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tice (US 5,659,292) in view of Muller (US 3,940,753).

Regarding claim 26, Tice discloses all the limitations in claim 21 but fails to explicitly disclose an optical filter and where the first signal is indicative of incident ambient light that has passed through the filter.

However, Muller discloses an optical filter and where the first signal is indicative of incident ambient light that has passed through the filter (optical filter filtering radiation from flame, for example passing red and blue light) (col. 3, line 68; col. 4, lines 1-3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Muller in Tice in

order to transmit higher fidelity signals thereby preventing false alarm as taught by Muller (col. 3, lines 48-60).

Regarding claim 42, Tice discloses a method of monitoring a region (col. 1, lines 12-34) comprising: sensing a radiant energy parameter in a region (col. 3, lines 56-65); sensing a hazard parameter indicative of by-products of combustion in the region (col. 4, lines 8-14); sensing a thermal parameter in the region (col. 4, lines 60-64); evaluating the thermal parameter for an indication of elevated heat in the region (thermal sensor measures a temperature above 135 degree) (col. 4, lines 60-64); determining if the by-products of combustion are indicative of the presence of a hazardous condition in the region (col. 9-14).

Tice discloses all the limitations above but fails to explicitly disclose the step of evaluating the radiant energy parameter for the presence of flame and responsive thereto; altering a sensitivity parameter associated with at least one of the hazard parameter or the thermal parameter in response to the results of evaluating the parameters.

However, Muller discloses evaluating the radiant energy parameter for the presence of flame and responsive thereto (sensors 1 or sensor 2 are evaluated to detect the presence of flame) (col. 2, lines 20-26); altering a sensitivity parameter associated with at least one of the hazard parameter or the thermal parameter in response to the results of evaluating the parameters (col. 2, lines 20-30; col. 6, lines 4-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Muller in Tice in order to transmit higher fidelity signals thereby preventing false alarm as taught by Muller (col. 3, lines 48-60).

Regarding claim 45, Tice discloses the step of producing an indicium of a selected hazardous condition in response to sensing at least one of the hazard parameter or the thermal parameter (col. 3, lines 64-65; col. 4, lines 60-64).

Regarding claim 46, Tice discloses the step of altering the indicium in response to sensed radiant energy (col. 3, lines 64-65; col. 4, lines 32-42).

Regarding claim 47, Tice discloses the step of increasing a magnitude of the indicium in response to sensed radiant energy (increasing density) (col. 3, lines 60-65).

Regarding claims 48-49, Tice discloses producing the indicium, at least in part, in response to the sensed hazard parameter > Claim 49 to the sensed thermal parameter (col. 3, lines 60-65; col. 4, lines 60-64).

Regarding claim 50, Tice discloses increasing a magnitude of the indicium in response to sensing a flaming condition (col. 3, lines 60-65; col. 4, lines 60-64).

Regarding claim 51, Tice discloses coupling at least some of the parameters to a displaced location for processing (fig. 3-fig. 4).

Regarding claim 52, Tice discloses the step of sensing at least the radiant energy and the hazard parameter at spaced apart locations in the region (col. 5, lines 31-35).

Allowable Subject Matter

6. Claims 3, 43, 44, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: in combination with all the limitations in the claim, the prior arts fail to teach or make obvious: the response time is responsive to increasing radiant energy to reduce the sensitivity parameter and to substantially step changes reducing radiant energy to increase the sensitivity parameter.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Anderson (US 6,150,935) discloses a fire alarm system with discrimination between smoke and non-smoke phenomena.

Peltier et al. (US 5,708,414) discloses a sensitivity fault indication technique implemented in smoke detector system with self-diagnostic capabilities.

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Wiemeyer (US 5,726,633) discloses an apparatus and method for discrimination of fire types.

Bauer (US 4,680,576) discloses a photoelectric smoke detector and alarm system.

Jen et al. (US 6,445,292) discloses a processor based wireless detector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is (571) 272-2971. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

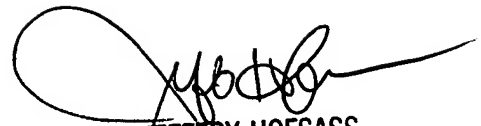
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Daniel Previl
Examiner
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DP
April 27, 2005.



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